

WHAT IS CLAIMED IS:

1. An in-plane switching mode LCD device comprising:

first and second substrates;

gate and data lines defining a pixel region on the first

5 substrate;

a plurality of common and data electrodes formed to cross
one another within the pixel region at constant intervals;

a common line formed in parallel with the gate line, the
common electrodes being diverged from the common line;

10 a thin film transistor formed in a crossing portion of
the gate and data lines; and

a liquid crystal layer formed between the first and
second substrates,

wherein the data electrodes are connected with the thin
15 film transistor at one side and the data electrodes overlap
the common line at a minimum area so as not to affect electric
field generated between the common electrodes and the data
electrodes.

20 2. The in-plane switching mode LCD device of claim 1,
wherein the common electrodes include a first common electrode
formed in parallel with the data line and diverged from the
common line within the pixel region; a second common electrode
formed with at least one data electrode interposed between the

first common electrode and the second common electrode in parallel with the first common electrode and diverged from the common line; and a third common electrode formed with at least one data electrode interposed between the second common electrode and the third common electrode, having one end connected with one end of the second common electrode.

3. The in-plane switching mode LCD device of claim 2, wherein the data electrodes include a first data electrode having one side connected with the thin film transistor and the other side extended to an upper portion of the common line, and a second data electrode formed between the second common electrode and the third common electrode and connected with the first data electrode at the upper portion of the common line and with the one side of the first data electrode.

4. The in-plane switching mode LCD device of claim 3, wherein the first and second data electrodes on the common line are separated from each other.

5. The in-plane switching mode LCD device of claim 1, wherein the data electrode overlapped with the common line has edge portions selectively located inside and outside the common line.

6. The in-plane switching mode LCD device of claim 5,
wherein the inside and outside locations of the edge portions
depend on a rubbing direction.

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7. The in-plane switching mode LCD device of claim 5,
wherein the edge of the data electrode located inside the
common line is further from the edge of the common line than
the edge of the data electrode located outside the common
line.

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8. The in-plane switching mode LCD device of claim 1,
wherein the data electrodes have one side connected with the
thin film transistor and the other side overlapped with the
common line.

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9. The in-plane switching mode LCD device of claim 1,
wherein the data electrodes have one side connected with the
thin film transistor and the other side overlapped with the
common line and the gate line.

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10. An in-plane switching liquid crystal display device,
comprising:

a plurality of parallel data lines;

a plurality of gate lines, crossing the data lines, such that a pixel region is defined by the data and gate lines;

a thin film transistor comprising source, drain and gate electrodes formed at a crossing point of the data and gate

5 lines;

a common line within the pixel region;

a plurality of common electrodes extending in a direction perpendicular to the common line;

a plurality of data electrodes parallel to the common electrodes, first ends of the data electrodes connected to the drain of said thin film transistor, the data electrodes and the common electrodes forming an alternating pattern; and

a transverse data electrode overlying the common line and connecting second ends of the data electrodes, the transverse data electrode having a first portion having a first width and a second portion having a second width, wherein the first width is less than the second width;

wherein the first width is sufficiently narrow that disclination is removed.

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11. The in-plane switching liquid crystal display device of claim 10, wherein first ends of the common electrodes intersect the common line wherein at least one corner portion

of a vertex of the intersection of the common electrodes and
the common line is rounded; and

wherein at least one corner portion of a vertex of a
connecting point of the second ends of the data electrodes and
5 the transverse data electrode is substantially rounded

12. The in-plane switching liquid crystal display device
of claim 11, wherein the first portion of the transverse data
electrode corresponds to the at least one corner portion of
10 the vertex of the intersection of the common electrodes and
the common line.

13. The in-plane switching liquid crystal display device
of claim 12, further comprising a transverse common electrode
15 connected to second ends of the common electrodes, wherein at
least one corner portion of a vertex of the intersection of
the common electrodes and the transverse common electrode is
rounded.

20 14. The in-plane switching liquid crystal display device
of claim 13, wherein the second ends of the data electrodes
connect to a second transverse data electrode, the second
transverse data electrode having a third portion having a

third width and a fourth portion having a fourth width,
wherein the third width is less than the fourth width.

15. The in-plane switching liquid crystal display device
5 of claim 14, wherein the third portion of the second
transverse data electrode corresponds to the at least one
corner portion of the vertex of the intersection of the common
electrodes and the transverse common electrode.

16. An in-plane switching liquid crystal display device,
10 comprising:

a plurality of parallel data lines;

a plurality of gate lines, crossing the data lines, such
that a pixel region is defined by the data and gate lines;

15 a thin film transistor comprising source, drain and gate
electrodes formed at a crossing point of the data and gate
lines;

a common line within the pixel region;

a plurality of common electrodes extending in a direction
20 perpendicular to the common line;

a plurality of data electrodes parallel to the common
electrodes, first ends of the data electrodes connected to the
drain of said thin film transistor, the data electrodes and
the common electrodes forming an alternating pattern; and

a transverse data electrode overlying the common line and connecting respective ends of the data electrodes;

wherein a first distance between an edge of the transverse data electrode in a first region and an edge of the common line in the first region is greater than a second distance between the edge of the common line in a second region and the edge of the transverse data electrode in the second region.

17. The in-plane switching liquid crystal display device of claim 16, wherein the first distance is greater than the second distance by 50%.

18. The in-plane switching liquid crystal display device of claim 16, wherein the first distance is sufficiently large so that the disclination is substantially removed.

19. An in-plane switching liquid crystal display device, comprising:

a plurality of parallel data lines;
a plurality of gate lines, crossing the data lines, such that a pixel region is defined by the data and gate lines

a thin film transistor comprising source, drain and gate electrodes formed at a crossing point of the data and gate lines;

a common line within the pixel region;

5 a plurality of common electrodes extending in a direction perpendicular to the common line;

0 a plurality of data electrodes parallel to the common electrodes, the data electrodes and the common electrodes forming an alternating pattern, each of the data electrodes having a first end, a main part and a second end, the first ends electrically connected to the drain of said TFT, the main parts having a first width, at least one of the respective second ends overlying the common line and having a second width, the at least one second end having at least one edge overlapping an edge of the common line, the first width being less than the second width; and

15 a transverse data electrode overlying the common line and connecting second ends of the data electrodes, the transverse data electrode having a first portion having a first width and a second portion having a second width, wherein the first width is less than the second width;

20 wherein the first width is sufficiently narrow that disclination is removed.

20. The in-plane switching liquid crystal display device of claim 21, wherein respective second ends of the data electrodes that overlie the common line are not connected to each other on the common line.